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ABSTRACT

This paper describes the current debate over developmentally appropriate teaching practice. The paper presents the perspective of multicultural educators, who argue that developmentally appropriate practice is biased toward white, middle-class values, and the perspective of special educators, who argue that modification of developmentally appropriate practice is necessary for their populations. This paper suggests that lost in the debate is the fact that developmentally appropriate practice is not fully implemented in early childhood programs because many teachers, parents, and administrators do not understand the difference between the teaching of skills, labels, and concepts, and the relationships between these ideas, in order to know whether their teaching is consistent with developmentally appropriate practice. The paper defines skill as an ability or proficiency acquired through practice, labels as what things are called, and concepts as acquired understandings. The paper discusses several typical early childhood activities in terms of skills, labels, and concepts, including learning shapes, calendar, colors, alphabet, numbers, and cutting on a line. The paper suggests that children should be allowed to work in the most effective way for them to learn, which would include interaction of skills, concepts, and labels learning. The paper warns against turning away from developmentally appropriate practice because practice might then revert to stressing learning of labels and skills at the expense of learning concepts. (Contains 43 references.) (SD)

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OF LABELS, SKILLS AND CONCEPTS

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Of Labels, Skills and Concepts

Recently developmentally appropriate practice (Bredekamp, 1987) has come under considerable debate (Fowell and Lawton, 1992; Fowell and Lawton, 1993; Carta, Atwater, Schartz & McConnell, 1993; DEC 1993; Odom, 1994; Woley and Bredekamp, 1994). This debate has been triggered by criticism from generally two different directions: multicultural educators and special educators. Multicultural educators believe aspects of developmentally appropriate practice are biased toward white, middle-class values, and therefore perpetuate middle-class educational pedagogy (Delpit, 1988; Jipson, 1991; Bowman, 1992). Because special educators often concentrate on specific deficiencies, and use behavioral techniques to address these deficiencies, they believe developmentally appropriate approaches are not well suited for children with special needs (Carta, et al, 1993; Carta, 1994). Others argue that significant additions and modification in developmentally appropriate practice must be made for it to truly meet the needs of children with disabilities (Woley, Strain and Bailey, 1992). Lost in this debate is the fact that developmentally appropriate practice is not fully implemented in many of our child care, Head Start and early childhood programs attached to public schools - even those with few special needs children, and homogeneous populations.

While there are a variety of explanations for this problem, one reason is because many teachers, parents and administrators do not know the difference between teaching skills, labels and

concepts. Because early childhood is the period when so many abilities are being developed, and when a great amount of mental and conceptual development cannot be observed, there is a tendency to want to see children demonstrate acquisition of new skills and abilities. We want to believe a child who counts to 100 actually understands all the concepts associated with that activity; a child who can recite the alphabet must surely know concepts of letter sounds, we assume. Further, because parents are naturally anxious regarding the academic progress of their children, educators often feel tempted to concentrate on teaching labels and skills, rather than the much more complex process of concept development (Crosser, 1994; Swanson, 1994). And, energized by Goal 1 of Goals 2000 - misinterpreted, some might argue (Kagan, 1990; 1992), many schools still use entry tests that evaluate a child's acquisition of skills and labels, rather than concepts (Miesels, 1992; Passidomo, 1994). Use of these tests also encourages curricula and instruction that teaches to the test (skills and labels) rather than teaching concepts (Passidomo, 1994).

But if we truly believe developmentally appropriate curricula and practices are the best preparation for future school and life success of our children, and provides the kind of early childhood education children deserve, we need to know what we are teaching - labels, skills or concepts. We need to know the relationship between these ideas, and whether teaching each of them is consistent with developmentally appropriate practice.

Skills

Clearly the line between skills, labels and concepts is not clear; it is not the purpose of this paper to create operational definitions of each term. Generally skill involves an ability or proficiency that is acquired though practice. When a child has gained a skill we can clearly say he can repeat a task. But we cannot necessarily say he understands the concepts behind the task. A child who can count to 100 and recite the alphabet has learned the skill to count to 100 and recite the alphabet. But we cannot assume anything more: that he knows 99 is one less than a 100; that he knows the phonetic sounds of each letter, or that a word is made up of a combination of some of the letters he has just recited. Many skills are related to physical activity: riding a bicycle, climbing a ladder, performing a dance, cutting along a line with scissors.

Labels

Labels are what we call things: the words we use to label quantity are numbers; the words we use to name letter sounds are letters, and the words we use to label the culturally accepted categories of light and pigment are called colors. Labels always represent complex concepts. The concept of numbers (equally distant from each other, sequential, base ten, etc.,), and the concept of red ranging from pink to orange to Chinese red, are examples. Unfortunately one can - and children often do - learn the label before they learn the accompanying concept.

Concepts

Number concepts have been carefully and accurately written

about by many authors (Kamii 1982; Greenberg, 1993 and 1994) and are, maybe, the best example of how complex, multifaceted and difficult the notion of concept acquisition is. Added to the overwhelming complexity of many concepts is the notion that children develop understanding of concepts through a sequential, stage approach that moves from broad, clumsy and inaccurate generalization to more and more accurate understanding. Further adding to the confusion is that concept development often contradicts the assumption many teachers have regarding the way children learn (Waring-Chaffee, 1995).

To help understand the differences and relationships between skills, ~~shapes~~ labels, and concepts, this article will discuss several typical early childhood activities, such as learning the alphabet. It will attempt to show what aspect of teaching this activity involves skill, label, and/or concept acquisition, (Figure 1).

Shapes

Clearly the label aspect of learning shapes has to do with learning the names of shapes, and associating the correct name with the correct shape. The skill part of shapes would seem to do with the ability to see shapes in the world around us: circles in wheels, suns and moons; squares and rectangles in furniture, traffic signs, picture frames and windows, and triangles in traffic signs, playgrounds and maps.

A conceptual component of shapes has to do with the function of shapes. Why is it that wheels and rollers are round? Why is it that many traditional buildings - especially in Western

traditions - use the rectangular post and lintel construction? Why is the arch - in buildings, viaducts, and bridges - so prevalent?

Another concept of shapes has to do with the relationship of 2 dimensional shapes with three dimensional shapes. For example, there are six flat squares in the surface of a cube, yet no flat circles on the surface of a sphere. Why? Our world is full of geometric shapes that have very specific physical functions. Activities with blocks, solid spheres, hollow blocks, marbles, wheeled toys, balls, paper constructions, cardboard boxes, and wood work are all ways to help teach these concepts of shape. Yet we stress the label and skill aspects of learning shapes.

Reading the Calendar

The traditional activity of reading a calendar (day, date, month and year) stresses learning labels and skills, at the expense of learning complex concepts of time (Clemens, 1993; Fairchild & Van Scoy, 1993). The labels we are teaching are the days of the week, the names of the month, the date of the year, and the labels of numbers 1 to 31. The skill we are trying to teach is the ability to 'read' a calendar - recite the date, month, year and day of the week.

The concepts we should be teaching during this activity include: the repetitive nature of a week, the base 5 and base 7 concept of a week (school days, regular days), the linear nature of time, the concept of before (past) present (now) and future, and predictability (Fairchild and Van Scoy, 1993;

Wardle, 1996). Other concepts that can be taught include the seasons, growth cycles, the lengthening and shortening of the days, and weather patterns associated with different seasons (depending on where we are teaching).

Learning Colors

Many early childhood curricular require children to learn the names of colors, starting with the primary colors. This naming process is the labeling activity. Associating labels with the color itself, and being able to point out these colors in the naturalistic environment, are specific skills we are teaching. Other skills include knowing the cultural values of colors (red=stop; green=go) and selecting the right color paints, crayons, color pencils and felt pens to use in painting, drawings and messages (especially when a child begins to draw realistically).

What color concepts are we teaching? A whole range of color concepts are associated with art and aesthetics (Colbert & Tauton, 1992; Schiller, 1995; Seefeldt, 1995;). These include developing an appreciation for visual arts, and an ability to enjoy color use and combinations. Other color concepts include the range of colors within a category (for example, pink to red to red-orange to red-purple all fit under the red label), the use of colors as critical features in grouping, classifying and sorting objects (Greenberg, 1993) and the use of colors as indicators of physical and biological status (health of plants, pollutants in rivers, mineral composition of soil, etc).

Because color value, intensity and hue are used in so much

higher learning - medical, weather, maps, biology, photography, architecture, printing, etc., - we should be spending time and energy teaching concepts associated with color (light and pigment).

Alphabet.

Maybe the most traditional subject in all early childhood programs is teaching the alphabet. Parents seem to view this activity as a clear indication of their child's learning; teachers as an indication of teaching. Clearly the label component is learning the names of each letter. The skill component has to do with learning to recite the alphabet from A to Z, and being able to associate the correct letter sounds with each letter. Being able to correctly write each letter, both upper and lower case, is another skill we teach in our programs.

It is difficult to discuss the conceptual components of learning letters because a true emergent literacy approach requires children to learn letter sounds and shapes within the context of a vast range of learning - listening to books being read, oral language development, scribbling and symbolic art activities, 'reading' symbols, learning words have meaning, distance between words, left to right and top to bottom concepts, etc., (Kontos, 1986; Clay, 1987; Fisher, 1995;). Concepts that revolve around letters have to do with phonetic awareness, constancy, discrimination between letters, directionality of letters (up, down, right, left), stringing letters together, rhyming letters, and hard and soft sounds (Mills, O'Keefe and

Stephens, 1992; Clay 1987 and 1991).

Numbers

A great deal has been written about how children learn the conceptual properties of numbers and the mathematical functions we teach (Kamii, 1982; Greenberg, 1993 and 1994). We know that number concepts and mathematical functions are highly complex and require deep conceptual knowledge. Yet we still stress teaching labels and skills. The labels taught include the names of every number (the higher the better), and the names of mathematical functions (adding, multiplying, etc.). Skills include writing the number, counting in sequence (the higher the better), learning simple math computations (often on paper) and matching a label to a quantity (5 to five dots on a piece of paper).

Number concepts children learn at a young age are too numerous and complex to cover here. They include learning the quantity between each number is always the same; the sequential nature of numbers, the constancy of numbers, the grouping of numbers according to our base ten system, and the relationship between addition and subtraction, multiplication and division (Greenberg, 1993; 1994).

Cutting along a line.

Many early childhood programs provide opportunities for children to learn to cut along a line with scissors: either integrated into project-related activities, or - more often - through repetitive skill exercises. Clearly this popular early childhood activity does not have a label or labels associated

with it; the skill is the narrow ability to correctly hold a pair of scissors and use them to cut along a line. Broader skills have to do with eye-hand coordination, information processing to direct the muscles of the hand, and development of attention. Conceptual issues are unclear. Maybe we are teaching about the value of concentration and attention. Maybe we are teaching no real conceptual knowledge.

Which comes first?

It would be easy to suggest children need to learn concepts, then skills, and finally labels. We know concrete experiences precede academic learning. We also know that learning labels first can inhibit learning certain concepts (Greenberg, 1993 and 1994; Kuball, 1995), and that, for specific cases, it is clear basic concepts must be formed before specific skills can be learned (Greenberg, 1993). We also know that some skills we teach cannot be learned by the preoperational child (Harris, 1986). Further, teaching skills and labels often prevents children from spending time doing the important things all children should do (Kissel, 1996). Our need to stress concept development before labels and skills is also motivated by our horror at the over-emphasis of teaching skills and labels in many of our early childhood programs.

But it is inaccurate to assume concept development must always precede labels and skill development. Piaget has argued children need words (labels) to formulate and manipulate ideas. Bruner has shown us that children often use labels in ways that are very different from the way adults use them. His famous

statement, "a hole is to dig" illustrates that children use labels to represent action concepts - the digging a hole (Bruner, 1966; Bruner, Olver and Greenfield, 1966). When my child first used the slide on the climber I built for her, she yelled, "Wheeeee". After that, every time she wanted to play on her slide, she would look at me in excitement, and say, "wheee?" Bruner has also shown how children develop memory systems by going from enactive representation (muscle memory) to ikonic representation (symbols) to abstract memory (Bruner 1966). This suggests that the process of developing labels is closely tied to developmental stages - that children develop concepts and labels at the same time.

And there are many examples where specific skill acquisition directly influences concept development. Learning to throw a ball teaches much about the concepts of gravity, force, resistance, and muscle control; learning to saw a piece of wood teaches about the properties of wood, the nature of how a saw works, and knowledge of sawdust.

It would seem then that, optimally, children should work on their environment in the most effective way for them to learn, which would include an interaction of skills, concepts and labels. What is critical for early childhood educators is not to stress teaching one of these three aspects of learning at the expense of other learning, not to teach skills and labels when the foundation concepts for them don't exist, and - most importantly - not to assume that, by teaching labels and skills, the child has automatically learned the complex, multifaceted

concepts that it is assumed the label or skill represent. A child who knows the alphabet does not necessarily know anything about writing and reading; a child who can count to 100 may not know the difference between $5 and $100; and a child who has memorized the calendar may have no clue of what occurred last Tuesday. And, clearly, the temptation to concentrate on teaching skills and labels is because it is so easy to see when they have been taught, and to communicate to parents the success of our teaching.

The danger in the current criticism of developmentally appropriate practice is that we will revert back to stressing the learning of labels and skills, at the expense of learning concepts. The suggestion that advocates of developmentally appropriate practice are soft on academics, because it stresses concept development, and views the role of the teacher as more of a facilitator than a director, must be strongly resisted (Bredekamp & Shepard, 1989; Kostelnik, 1992; Bredekamp, 1995). Further, legitimate concerns regarding culturally appropriate practice and intervention to address special needs issues in specific developmental areas, must not divert us from the critically important mission of making all of our programs truly developmentally appropriate. Because of a deep concern regarding the quality of American education, because of political pressure to implement Goal 1 of Goals 2000 (Willer & Bredekamp, 1990; Kagan: 1990; 1992;), because of increased funding of public preschool programs (Wardle, 1989) and because of the intense marketing of products like, "Hooked on Phonics", many of our

Head Start, religious, corporate and school-based early childhood programs are still a long way from being developmentally appropriate. We must not weaken our efforts as we address issues of culture and special needs. One way to help us in this task is to clearly keep in mind the distinction between labels, skills and concepts.

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ACTIVITIES	SKILLS	LABELS	CONCEPTS
SHAPES	Identifying shapes in the naturalistic environment. Drawing shapes correctly.	Assigning names to shapes, such as square, circle and triangle.	Function of shapes (round for rolling, rectangular for building); relationship between 2D and 3D shapes; shapes in nature.
READING THE CALENDAR	To 'read' the day of the week, date of the month, month and year.	Names of each day, each month, numbers 1 to 31 and date of the year.	Linear nature of time; base 5 and 7 of a week; repetitive nature of a week, past, present and future; seasons.
LEARNING COLORS	Discriminating colors in the environment; selecting paints, crayons and pens to make realistic representations.	Names of colors, beginning with primary colors.	Aesthetics; mixing and matching colors; use of color to discriminate and classify; use of colors in other disciplines.
ALPHABET	Recite the entire alphabet. Learn one sound for each letter. Copy each letter.	Learn names of each letter. Name words a child has learned to 'read'.	Letter sounds are the building blocks of reading. Emergent literacy concepts. Directionality of letters. Love of reading.
NUMBERS	Copy each number, one to as many as possible. Recite numbers, as high as possible. Do simple math.	Name each number, as high as possible. Label math functions (add; subtract).	Sequencing value, quantity, reversibility, base ten, grouping, classifying.
CUTTING ALONG A LINE	The ability to cut along a line, staying on the line, with scissors.	None.	Develop concentration and attention. Use cutting to develop more complex concepts.

Fig.I Teaching Skills, Labels and Concepts for Typical Early Childhood Activities